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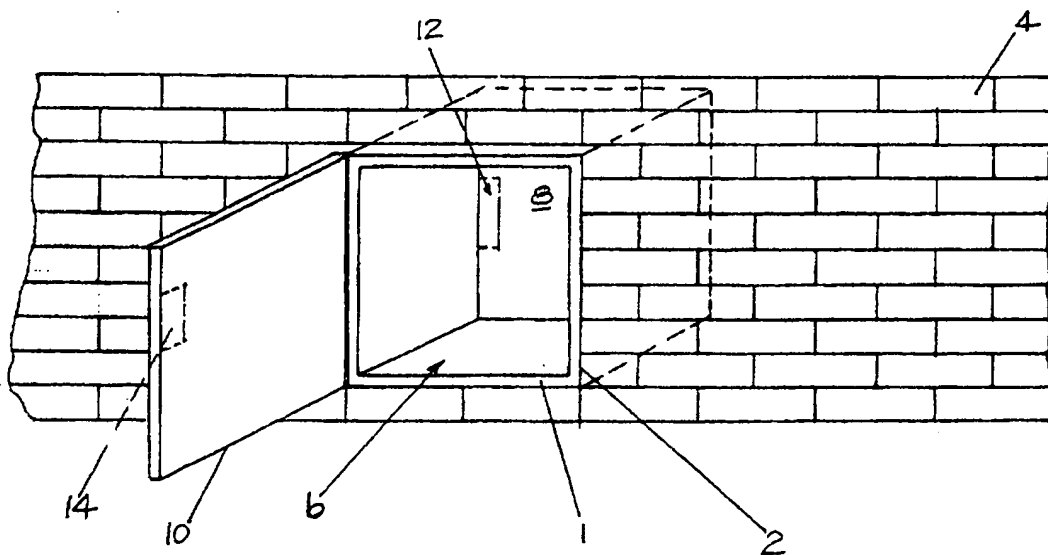
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(56) Documents Cited
GB 2333095 A **FR 002615895 A** **JP 052110700 A**
US 4204632 A

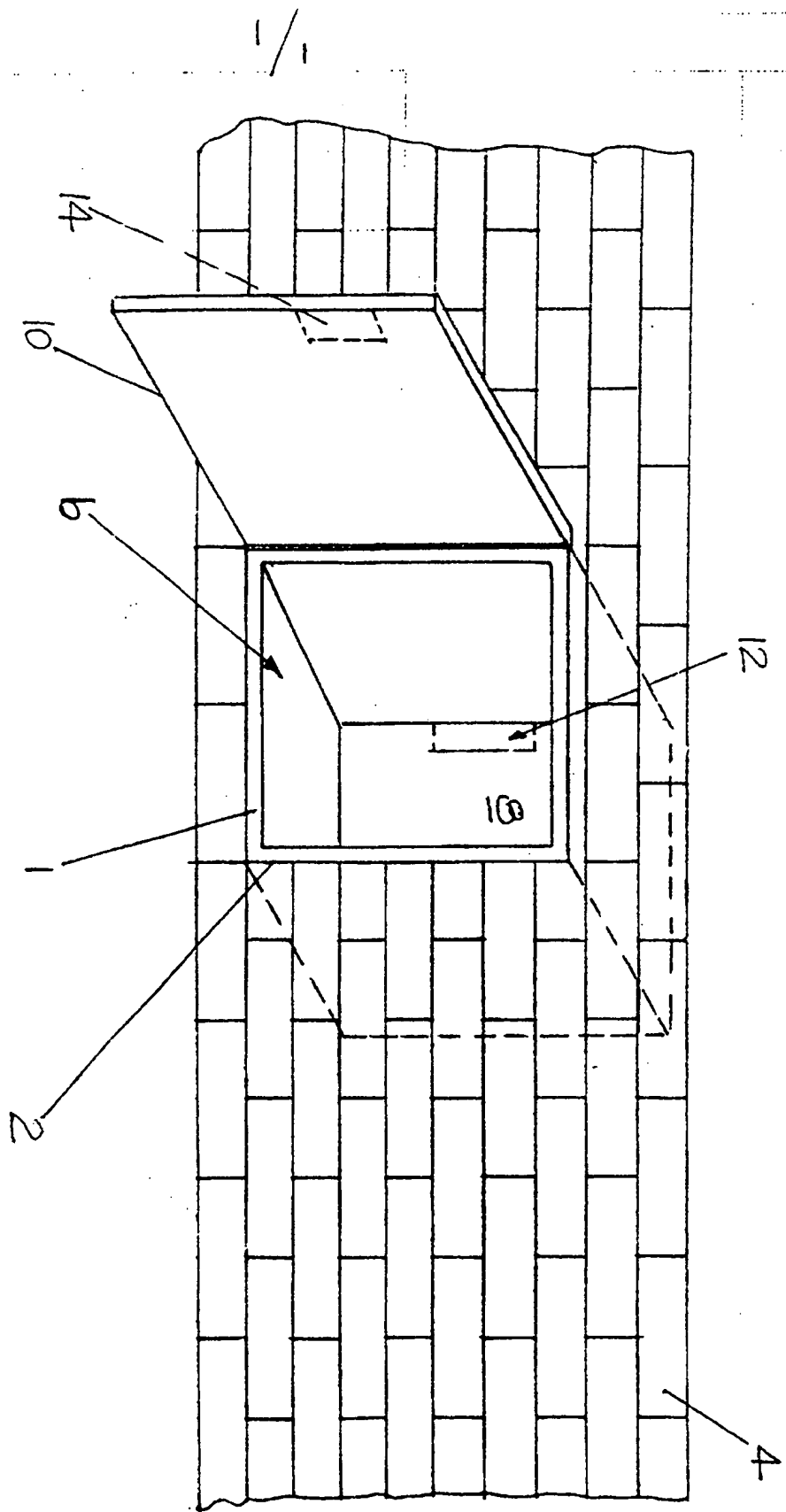
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(54) Abstract Title
A secure receptacle

(57) A receptacle 1 for receiving goods, is set between the outside wall and the inside wall of a building 4; and comprises a chamber 6 and two doors, a front door 10 (outside the building) and a rear door 8 (inside the building). The doors when closed are secured by locking means 12, 14 eg. key locks, swipe cards, alpha numeric key pads. An interlock is provided such that only one door may be opened at a time. On closing the front door a signal means inside the building indicates the presence of goods within the chamber.



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IMPROVEMENTS IN OR RELATING TO SECURE
RECEPTACLES

This invention concerns improvements in or relating to secure
5 receptacles and in particular has reference to receptacles for the safe
custody receipt of deliveries at temporarily unoccupied premises.

In modern times, especially with the advent of the internet and
telephonic ordering, people are able to order and purchase items at all
10 times of the day, but due to the pressures of work and indeed of
recreational activities prevalent today they are frequently unavailable
to take delivery of the items ordered. Typically, goods are left by
delivery men at the appropriate address preferably in a location which
does not betray the fact that there is no-one at home or on the premises
15 concerned, for example at the rear of the premises. In the alternative,
some delivery men will take the trouble to seek out a neighbour willing
to take in the goods, but not always with success. Accordingly, goods
remain unattended with the potential for theft and perhaps more
importantly with the possibility that observers will associate
20 unattended parcels with vacancy of the property, thereby leading to the
possibility of burglary.

It is already known, for example in the banking world, to employ night
safes to which authorised individuals, ie customers, have access with a
25 key for the out-of-hours deposit of cash and cheques. Clearly, without
possession of the key, it is impossible to gain entry to the safe.

An object of the present invention is to provide a secure receptacle
suitable for use in the domestic or indeed the commercial environment

whereby parcels or goods generally can be left safely without the possibility of theft.

According to the invention, there is provided a secure receptacle
5 adapted for installation within the fabric of a building, the receptacle
defining a chamber having a first secure closure member allowing
access thereto in use externally of the building, and a second secure
closure member allowing access to the chamber in use internally of the
building, the first and second closure members being independently
10 operable such that access to the chamber of the receptacle is possible
through the agency of one closure member at any one time.

Each closure member is advantageously rendered secure by being
provided with a locking mechanism. The locking mechanism may be a
15 simple lock operable by a key, or in the case of the internal closure
member the locking mechanism may be a bolt to which there is no
access through the external closure member.

In the alternative, the locking mechanism for each closure may be
20 operable using an alpha-numeric or numeric combination which may
conveniently be provided on a pad, the combination being in the form of
a Personal Identification Number (PIN), access to the chamber of the
receptacle only being possible by possession of the PIN. In an
alternative a swipe card arrangement or a smart card may be used.

25

The closure members may be electronically interlocked so as to ensure
that the operation of one member to gain access to the chamber
automatically prevents the operation of the other member.

The locking mechanisms of the closure members may be controlled by software run on a computer located within the building. In this way the PINs or card access codes may be regularly or intermittently altered to add to the security of the receptacle.

5

A further security feature of the invention is that the outer closure member is openable only if the receptacle is empty and a suitable system is provided for that purpose within the software or in the alternative a mechanical interlock may be provided to ensure that access to the chamber is denied when the chamber is full.

10

The secure closure member located externally of the building in which the receptacle is located may be provided with a handle for ease of opening, the handle being adapted to fail to safety in the event of any undue force, for example for the purpose of theft, being applied, thereby ensuring that no access to the interior of the receptacle can be gained without the necessary authority.

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Further security measures may, for example, include denial of access if a predetermined number of failed attempts to input the PIN code is reached.

20

Means may also be provided whereby any access through the external secure closure member generates a visual indication within the building. Such indication may be a simple mechanical display, or a visual report appearing on the computer where such is provided.

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By way of example only, one embodiment of secure receptacle according to the invention is described below with reference to the accompanying

drawing which is a diagrammatic view of the receptacle shown externally of a building in which the receptacle is located.

Referring to the drawing, the secure receptacle of the invention is shown at 1 and is essentially of cuboid box-like form.

The receptacle 1 is shown fixed *in situ* within a suitable aperture 2 formed in the wall 4 of a building (not shown). The fixture being such that extraction of the receptacle 1 cannot easily be effected, there being
10 provided suitable constraints in this respect.

The receptacle 1 provides a chamber 6 giving a through passage from the exterior of the building to the interior. The chamber 6 is provided with an internal secure closure member in the form of a door 8 and an
15 external closure member in the form of a door 10, there being provided a security feature whereby when one door is open the other is closed and unopenable.

Each door 8, 10 has a locking mechanism 12, 14 and in this particular
20 example the locking mechanism is actuatable by the inputting of a PIN which is unique and of which only selected personnel have possession thereby restricting access to the chamber 6.

Conveniently, the receptacle 1 may be so installed within the wall 4
25 above ground level and such that it is flush with the wall on the outside surface; a suitable cowl (not shown) may be provided to give protection against adverse weather conditions which might adversely affect the operation of the locking mechanism. Internally, equally the receptacle 1 is similarly installed to be flush with the wall where this
30 will give adequate volume to the chamber or in the alternative it may

protrude into the space within the building and may be secured into the floor; the receptacle 1 may be aestheticised especially where it is employed in a domestic environment. For example, suitable disguising features may be adopted and in this connection shelving discreetly positioned will camouflage the receptacle.

In use, with the receptacle 1 installed as shown *in situ* within the wall 4 and the doors 8, 10 closed and locked by the mechanisms 12, 14, no access to the chamber 6 is possible. If a delivery of a parcel or goods is planned, the requisite PIN swipe or smart card is provided to the supplier; the deliveryman merely accesses the receptacle 1 by keying in the number or using the card to unlock the door 10. The parcel (not shown) is deposited within the chamber 6 and the door 10 relocks upon closure. The door may be spring-loaded into the closed position to ensure that in the event the deliveryman fails to close the door positively, it will nonetheless close under spring-loading. When the external door 10 is open for the purpose of delivery, the internal door 8 is not operable to open and no access therethrough can be had *via* the external door.

20

Once the external door 10 is closed and the chamber 6 is occupied by the parcel, unless otherwise authorised, no further access thereto is allowed through that door. The only access to the chamber 6 once a parcel has been delivered is through the internal door 8 upon operation of the locking mechanism 12 by inputting of the PIN or otherwise as appropriate to the form of mechanism, which may simply be in the form of a basic lock or even bolt, with optional padlock, actuatable from within the building.

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The secure receptacle of the invention thus allows safe delivery of pre-ordered items since only the deliveryman with the relevant knowledge of the PIN or possession of a swipe or smart card can gain access to the chamber 6 to deposit the item concerned; but access beyond the
5 chamber 6 into the building *via* the receptacle is not possible.

Where delivery of more than one item from different sources is expected, each source may be provided with a different PIN or other security code or card enabling sequential accessing to the chamber. A
10 further security feature in this connection may include the denial of access except when the chamber 6 has been emptied.

It will be understood that whilst the invention has been described giving specific examples of the principal features, other equivalent
15 variants may equally and efficaciously be employed.

CLAIMS:

1. A secure receptacle adapted for installation within the fabric of a building, the receptacle defining a chamber having a first secure
5 closure member allowing access thereto in use externally of the building, and a second secure closure member allowing access to the chamber in use internally of the building, the first and second closure members being independently operable such that access to the chamber of the receptacle is possible through the agency of one
10 closure member at any one time.
2. A receptacle as claimed in Claim 1 in which each closure member is rendered secure by the provision of a locking mechanism.
- 15 3. A receptacle as claimed in Claim 2 in which the locking mechanism is a simple lock operable by a key.
4. A receptacle as claimed in Claim 2 in which in the case of the internal closure member the locking mechanism is a bolt to which
20 there is no access through the external closure member.
5. A receptacle as claimed in Claim 2 in which the locking mechanism for one or both closure members is operable using an alpha-numeric or numeric combination provided on a pad, the combination being in
25 the form of a Personal Identification Number (PIN), access to the chamber of the receptacle only being possible by possession of the PIN.

6. A receptacle as claimed in Claim 2 in which the locking mechanism for one or both closure members is operable by the use of a swipe or a smart card.
- 5 7. A receptacle as claimed in Claim 2 in which the closure members are electronically interlocked so as to ensure that the operation of one member to gain access to the chamber automatically prevents the operation of the other member.
- 10 8. A receptacle as claimed in Claim 2 or 5 or 6 in which the locking mechanisms of the closure members are controlled by software run on a computer located within the building.
- 15 9. A receptacle as claimed in Claims 5 or 6 or Claim 8 as dependent on Claim 5 or 6 in which the PINs or swipe or smart cards are regularly or intermittently altered.
- 20 10. A receptacle as claimed in any one of the preceding claims in which means are provided whereby any access through the external secure closure member generates a visual indication within the building.
11. A receptacle as claimed in Claim 10 in which the visual indication is a simple mechanical display.
- 25 12. A receptacle as claimed in Claim 10 when dependent upon Claim 8 in which the visual indication is provided by a report appearing on the computer.
- 30 13. A secure receptacle substantially as hereinbefore described with reference to the accompanying drawing.



Application No: GB 9921636.8
Claims searched: 1-13

Examiner: Peter Mason
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Patents Act 1977
Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK CI (Ed.R): E2X

Int CI (Ed.7): A47G: 29/14, 29/16, 29/20, 29/26, 29/28, 29/30

Other: Online: JAPIO, WPI, EPODOC

Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
X, Y	JP52110700 MATSUSHITA (see figs.)	X: 1,2,7. Y:3-6, 10-12
X, Y	FR2615895 MAGNAN	X: 1,2,5,7-9. Y:10-12
Y	GB2333095 A ARCHBOLD	3-6
Y	US4204632 COOK	10,11

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.